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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,171	12/04/2001	Jeremy Burr	5038-138	2907

7590 01/26/2005

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EXAMINER

PRIZIO JR, PETER

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,171

Applicant(s)

BURR ET AL

Examiner

Peter Prizio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 October 2004 has been entered.

Claim Status

2. Claims 1 – 30 are pending.
3. Claims 1 – 30 are rejected.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. **Claims 1-8, 10-12, 14, 18-20, 22, 23, 24 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application Laid-Open No. P2001 – 159948A to Shimono in view of US Patent Application Publication 2002/0036621 to Liu et al. (Liu).
6. Regarding claim 1, Shimono teaches a system for inductively transferring electrical power to a computer peripheral device during normal operation (Drawings 1, 3

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& 17) including: a source loop (Lx), a loop power circuit (3, 4, 8 & 9), a power source coupler (Vcc, Gnd), a peripheral device (1) having a victim loop (Lm) to be inductively coupled to the base unit (Detailed Description, Paragraph 18). Shimono teaches a planer source for producing a magnetic field is silent and lacks the teaching of a three-dimensional structure i.e. a solenoid.

7. However, Liu (Fig. 1) teaches a position input system that comprises a source loop solenoid (34, for example: paragraph 30, clearly from Fig. 1 the coiled antenna is non planer) to generate a magnetic field (for example: paragraph 30).

8. Though Liu is directed toward a touch stimulating system, it is nonetheless powering a an input device using EM induction and therefore would have been obvious to one of ordinary skill in the art to modify the planer coil as taught by Shimono with the helical coil as taught by Liu for the benefit of creating a wireless mouse system utilizing helical coils in the pad and the mouse using an antenna that only circumvents the pad once and therefore generates a resulting EM with enough energy to power the input device without the need for loops residing beneath the surface of the pad in x and y directions thereby preventing interference therewith and providing am EM field with good uniformity.

9. Regarding claim 2, Shimono (Drawing 1), as applied to claim 1, teaches a mouse (1).

10. Regarding claim 3, Shimono (Drawing 1), as applied to claim 2, teaches a base unit incorporated in a mouse pad (2) (Detailed Description, Paragraph 11).

11. Regarding claim 4, Shimono (Drawing 16), as applied to claim 1, teaches a base unit comprising a first area with higher magnetic permeability (16) and a second area (14).
12. Regarding claim 5, Shimono (Drawing 16), as applied to claim 1, teaches a peripheral device comprising a first area with higher magnetic permeability (13) and a second area (11).
13. Regarding claim 6, Shimono, as applied to claim 5, teaches a peripheral device comprising a data transmitter and antenna (Detailed Description, Paragraph 22).
14. Regarding claim 7, Liu, as applied to claim 1, further teaches a victim loop (24) having a solenoid shape (paragraph 32).
15. Regarding claim 8, Shimono (Drawing 2), as applied to claim 1, teaches comprising one or more additional source loops (Ly).
16. Regarding claim 10, Shimono (Drawing 17), as applied to claim 1, teaches a data transmitter coupled to the peripheral device (7) and a data receiver coupled to the base unit (8).
17. Regarding claims 11 and 12, Shimono, as applied to claim 10, teaches a radio frequency data transmitter and receiver (Detailed Description, Paragraph 22).
18. Regarding claims 14 and 23, Shimono (Drawings 1 & 12) teaches a system and method for supplying power to a computer mouse (1) comprising: a base unit (2) having a power signal input connectable to a power source (V1), a magnetic source loop (Ly), a victim loop (Lm) in the mouse coupled to a load circuit (R3) while the source loop is proximate to the computer peripheral device (Detailed Description, Paragraph 20).

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19. Again, Liu teaches a positional input system comprising a helical or solenoid source loop (34) and therefore is a non-planar magnetic source loop (reference rejection of claim 1 above)

20. Therefore, it would have been obvious to one of ordinary skill in the art to modify the planer coil as taught by Shimono with the helical coil as taught by Liu for the benefit of creating a wireless mouse system utilizing helical coils in the pad and the mouse using an antenna that only circumvents the pad once and therefore generates a resulting EM with enough energy to power the input device without the need for loops residing beneath the surface of the pad in x and y directions thereby preventing interference therewith and providing an EM field with good uniformity.

21. Regarding claim 18, Shimono (Drawing 17), as applied to claim 14 above, teaches a bus (DAT, CLK, Vcc, Gnd), which powers a source loop signal generator (3) coupled to a magnetic source loop (Ly).

22. Regarding claim 19, Shimono, as applied to claim 18 above, teaches an oscillator (Detailed Description, Paragraph 11).

23. Regarding claim 20, Shimono, as applied to claim 19 above, teaches an oscillator which oscillates above 60 cycles per second (Detailed Description, Paragraph 18).

24. Regarding claim 22, Shimono (Drawing 17), as applied to claim 14 above, teaches a horizontally overlapped source loop (Lx) and victim loop (Lm).

25. Regarding claim 24, Shimono, as applied to claim 23 above, teaches a power signal that is a source loop driving signal (Detailed Description, Paragraph 21).

26. Regarding claim 26, Shimono (Drawing 17), as applied to claim 23 above, teaches a power signal coupled to a bus on a personal computer (DAT, CLK, Vcc, Gnd Grouping).

27. **Claims 27 – 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over published UK Patent Application GB 2,314,470 to Tien in view of Liu.

28. Tien (Fig. 2 & 3) teaches a method of charging a rechargeable battery (24) in a computer mouse (30) that has a magnetic victim loop (21) coupled to a battery recharging circuit (20) comprising: creating a magnetic field by driving a magnetic source loop (14) with a magnetic source loop driving signal (13), causing the magnetic field to interact with the magnetic victim loop in the mouse (Page 6, Lines 17-21), accepting a power signal from a power source (111), converting the power signal in to the magnetic source loop driving signal (11, 12, and 13), and generating an oscillating signal from the power signal using a pulse width modulation circuit (12). Though Tien teaches a planer coil.

29. However, Liu (Fig. 1) teaches a position input system that comprises a source loop solenoid (34, for example: paragraph 30, clearly from Fig. 1 the coiled antenna is non planer) to generate a magnetic field (for example: paragraph 30).

30. Therefore, it would have been obvious to one of ordinary skill in the art to modify the magnetic source loop as taught by Tien with the helical coil source loop as taught by Liu for the benefit of creating a wireless mouse system utilizing helical coils in the pad and the mouse using an antenna that only circumvents the pad once and therefore

generates a resulting EM with enough energy to power the input device without the need for loops residing beneath the surface of the pad in x and y directions thereby preventing interference therewith and providing an EM field with good uniformity.

31. **Claims 9, 13, 15, 21, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimono in view of Liu as applied to claims 1 and 14 above, and further in view of Tien.

32. Regarding claims 9, 13, and 15 Tien (Fig. 2) teaches rechargeable battery (24) and a recharging circuit (20) coupled between the victim loop (21) and the battery. Tien also teaches a peripheral device that is in operative condition when not inductively coupled to the base device (Fig. 3). It would have been obvious to one skilled in the art to modify Shimono in view of Liu with Tien in order to permit use of a peripheral device when not in the proximity of the source loop by incorporating a rechargeable battery that is charged during the operation when inductively coupled to the source loop, further, it would have been obvious to couple the rechargeable battery to the load in order to drive the load.

33. Regarding claim 21, Tien (Fig. 3) teaches a docking cradle (40) having a battery recharging circuit (10). It would have been obvious to one skilled in the art to modify Shimono in view of Liu with Tien for the benefit of charging the mouse when the mouse is not in use.

34. Regarding claim 25, Tien (Fig. 1) teaches a rectifying circuit (112) to rectify the power signal. It would have been obvious to one skilled in the art to modify Shimono in view of Liu with Tien in order to convert an AC power signal in to a DC power signal.

35. **Claims 16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimono in view of Liu, as applied to claim 14 above, in view of US Patent 4,754,268 to Mori. Mori (Fig. 1) teaches a mouse with a positional circuit (20) and a wireless data transmitter (10) powered by a power source (Col. 2, Line 16). It would have been obvious to one skilled in the art to modify Shimono in view of Liu with Mori for the benefit of an inductively powered wireless mouse that powers a positional circuit and a wireless data transmitter reducing the need for batteries in a wireless mouse.

36. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tien in view of Liu, as applied to claim 28 above, in view of Shimono. Shimono (Drawing 17) teaches accepting a power signal from a computer bus (DAT, CLK, Vcc, Gnd Grouping). It would have been obvious to one skilled in the art to modify Tien in view of Liu with Shimono for the benefit of powering a computer mouse using power supplied by the computer to reduce the number of AC outlets required by a PC.

Conclusion

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following publication has been made of record to further

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show input devices powered inductively by utilizing electromagnetic coupling from a pad:

Japanese Patent Application Laid Open JP 11-95922 A to Sato et al.

Response to Arguments

38. Applicant's arguments, see page 6, filed 27 September 2004, with respect to the rejection(s) of claim(s) 1 – 30 under U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Liu.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Prizio whose telephone number is (703) 305-5712. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternating Fridays off.

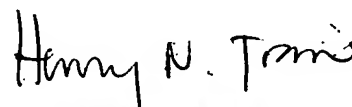
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Prizio
Examiner
Art Unit 2674

Prizio
January 18, 2005

pp


HENRY N. TRAN
PRIMARY EXAMINER